

Rhodora

JOURNAL OF THE NEW ENGLAND BOTANICAL CLUB

Vol. 51.

September, 1949

No. 609

CHARLES ALFRED WEATHERBY, BOTANIST AND HELPER OF BOTANISTS

M. L. FERNALD

(With portrait)¹

SYSTEMATIC botanists, and especially workers on the *Pteridophyta*, were saddened and almost shocked by the sudden death of Alfred Weatherby from a blood-clot early in the morning of June 21 last. Weatherby had so long been leaned upon for careful decisions regarding the classification of ferns, intricate questions in nomenclature and bibliography and matters of style in botanical writing that it seemed inconceivable that his always patient helpfulness to everyone must so soon cease. His place can hardly be filled.

CHARLES ALFRED WEATHERBY, intimately known as Alfred, was born on Christmas day, 1875, the son of Charles Nathaniel and Grace Weld (Young) Weatherby, at Hartford, Connecticut. In his own words², "Except for three years in Colorado Springs (which I remember as a place where one fell into irrigating ditches and had nose-bleed), I was brought up in East Hartford, then a country village with a hundred-foot wide street shaded by old elms, without electric lights, gas, telephones, sewers, city water, plumbing, or pasteurized milk, where one wore a bag of camphor

¹ The photograph was taken in the Herbarium of the Royal Botanic Gardens at Kew, in July, 1939, by the eminent pteridologist, Mr. FRANCIS BALLARD. The engraving is contributed, as his expression of admiration, by Mr. THOMAS F. BURBANK of the Wright Company, Engravers.

² The quotations regarding his own life are taken directly from Weatherby's brief and always modest autobiographical memoranda in the several printed Reports of the Class of 1897 of Harvard College.

hung about one's neck to fend off contagious disease, and where everybody was definitely more contented than now when they have all the above-mentioned blessings, no trees, a hundred feet of concrete pavement and rows of filling stations". In other words, he had the simple and unsophisticated boyhood of most boys of his generation who grew up in villages or small towns but who often had sulphur substituted for camphor in the bag suspended on a string from the neck.

The Hartford high school being then unable to fit boys for Harvard, Alfred was sent to local private schools and finally entered Harvard with the class of 1897, he stating, fifty-four years later: "I rather think I was the second boy to go to Harvard from Hartford since colonial times, speeded thither by the prediction of an old family friend that I should return a Unitarian and a free-trader. What I did learn was never to despise authority in intellectual matters and never to accept it unquestioned"; the latter most valuable intellectual attitude perpetually brought to bear in his future scientific writings. In college Weatherby concentrated in literature and allied fields, led a somewhat retiring life, with his special friends those of scholarly interests, joined none of the generally recognized college "clubs" (except the local chapter of *Delta Upsilon*, and a little exclusive group of eight congenial souls known, at least to themselves, as the Epicureans and who, Mrs. Weatherby informs me, kept up regular stimulating and amusing communications) nor any athletic teams. He was, therefore, of the quiet, undemonstrative and non-athletic type (as was, also, the present writer) whom some recent spokesmen would exclude from college as poor investments. He graduated with highest honors (*summa cum laude*), a fact which he modestly omitted from his published autobiographical notes, and as a member of *Phi Beta Kappa*. A year in the Harvard Graduate School gave him his A.M. in modern languages.

Five years of the closest study, without much physical activity, proved too much for his naturally limited strength, for in 1903 he wrote: "since I left Harvard in 1898, my health has been so poor that I have been unable to do any regular work". In a later summary he said: "I was an invalid for five years, twice given up by my physician, and was never really rugged there-

after. From this experience I learned that literature, my chief study in college, was for me a poor support *in extremis* and that science (I had botanized as a hobby) offered a much firmer foothold". More concrete as to his entry into a scientific field was his statement in 1912: "For a long period it was desirable for me to be as much as possible out of doors. Thereby an interest which I always had in the life of woods and fields, especially in plants, was stimulated until it became paramount". Thus the fields of botanical taxonomy, bibliography and the technical study of nomenclature became the gainers. Five years of intensive concentration in the literary field, followed by five years of invalidism, saw his start in a new and absorbing interest, and leaders in the classification of vascular plants the world over have applauded the scholarly advances in these subjects made by a seriously handicapped worker who never took a formal course in botany. He had, however, at his fitting school, the Collins Street Classical School in Hartford, and in his five years of devotion to literature at Harvard¹ acquired a linguistic background which was indispensable in the specialized field in which he became one of the most respected authorities—a field in which the great basic works were written in Latin and in which all new entities must, by International agreement, be described in Latin (instead of English, Polish, Chinese, Russian or other languages) in order to have validity. If he had been under the influence of those pragmatic scientists who today decry a classical background as a "waste of time" he would have been in the unfortunate position of those of us who, keenly interested in taxonomy and its related disciplines, have had to learn the hard way, by finding good models of the old school and trying to imitate their Latin. Or, if he had had only the minimum of training in rhetoric, syntax, philology and accurate composition nowadays allotted to students in the scientific fields, he could not have entered a polemical subject such as brewed for some time in Science in 1944. Toward the end of that particular discussion Weatherby published in Science for May 5, 1944, the following characteristic note:

¹ At a time when the elderly Francis J. Child and A. S. Hill headed a group of such younger masters in English and allied fields as Briggs, Barrett Wendell, Kittredge, F. N. Robinson and others.

"HORSE SERUM" A COMPOUND WORD

The discussion of "horse serum" has already reached considerable length, but it may be permissible to make one more point—namely, that every one concerned has misinterpreted the nature of the disputed phrase. It is not a case of one noun being used as an adjective to modify another; it is a compound noun, exactly analogous to such Greek compounds as thermometer. The first member takes the place, not of an adjective, but of a phrase. "Horse serum" is serum from a horse; "fence post" is post of a fence; "rat poison" is poison for rats. Thermometer, if its first member were adjectival, would mean a "hot meter," not a measure of heat. In most such cases, the compound has a special and definite meaning, not conveyed by an adjective and noun. Had this been understood, neither the original editorial faux pas nor the resultant burst of argument need have occurred. The author (or, if he forgot it, the editor) would merely have inserted a hyphen between "horse" and "serum" and all would have been well.

That the situation was not understood is partly because, though the use of compounds in place of prepositional or other phrases in English has increased in recent years by leaps and bounds, we have not yet developed a consistent or in any way adequate orthography for indicating them. This is admirably illustrated by the playful contributor who wrote "horse sense" and "horse-laugh" in the same sentence. The makers of the Century Dictionary perceived the usefulness of the hyphen as an indicator, but few have followed them. So long as we offend the verities by writing compounds as separate words—which they are not—we shall have confusion and wrangles like the present.

C. A. WEATHERBY

GRAY HERBARIUM,
HARVARD UNIVERSITY.

In the same vein but we hope not prophetic was his article on *Compound Words in present-day English*, published in Science for May 5, 1939. A single paragraph suffices to show a master's hand:

Thirty years ago every one, probably, would have written "Department of Biology". Now half the colleges in the United States have "Biology Department", or the like, on their stationery. Certainly, thirty years ago no one would have put forth such a title as "Cost Analysis of Scholarly Periodical Printing". Then it would have read: "An Analysis of the Cost of Printing Scholarly Periodicals". In time, as we become more definitely conscious of what we are doing, it may read: "Costanalysis of Scholarly-periodicalprinting".

After seriously entering botany as an amateur, Weatherby soon found himself drafted by the Connecticut Botanical Society as a member of the Committee to prepare a flora of the state, the *Catalogue of the Flowering Plants and Ferns of Connecticut*, published in 1910. The other members of the Committee were amateurs with remarkably full field-knowledge of their areas but

to Weatherby fell the task of coördination, the checking of recent revisions and the translation of specific and varietal names. These responsibilities brought him to the Gray Herbarium, where his unusual capacity for painstaking work was promptly recognized. He spent much of his time in the summers of 1908, 1909 and 1911 as a voluntary Assistant at the Herbarium, his first articles in the series, Contributions from the Gray Herbarium of Harvard University, being published in 1910 (although, beginning in 1904, he had been publishing minor notes in RHODORA) and dealing with a genus of the *Liliaceae*, the variations of *Lycopodium complanatum* and studies of various flowering plants of Mexico. His concentration on the *Pteridophyta* had not then begun.

From this time on Weatherby continued as a part-time and largely voluntary Assistant at the Gray Herbarium, cheerfully taking on tasks needing attention or carrying on individual studies but continuing to live at East Hartford with his mother. His marriage in Boston on May 16, 1917, to Una Lenora Foster brought a great change in his life. He now had a sympathetic partner on his botanical journeys and in his studies and a skillful artist to record many details of plants upon which he was working; and when in 1929 they moved to Cambridge their home quickly became the social center for all regular workers and all visitors at the Gray Herbarium. In fact, many visiting botanists were immediately taken into the Weatherby home for their visits to Cambridge and when they were to be away on long trips, either in America or in Europe, some botanist who needed to spend the summer in Cambridge was regularly invited to occupy their house. On moving to Cambridge Weatherby became full-time Assistant in the Gray Herbarium, becoming Assistant Curator in 1931, Senior Curator in 1937; and on retiring in 1940 he was appointed Research Associate. In the latter wholly honorary capacity he worked assiduously on the ferns and on problems in nomenclature and bibliography until late in the afternoon before his death.

Throughout this long service Weatherby, like all who are really devoted to their work, watched the clock only in order to keep appointments, overlooking most holidays and almost regularly appearing at the Herbarium, to continue his studies uninter-

rupted, toward noon on all Sundays when he was in Cambridge. He was interested in all vascular plants and after he and the writer had made a close study of *Puccinellia* he had a strong leaning toward the *Gramineae* as absorbingly interesting; but, gradually becoming conscious of the vast amount of intensive study needed by the *Pteridophyta*, especially of tropical and austral America, he got more and more into those problems and would gladly have spent all his time, after his curatorial responsibilities, upon them. Unfortunately for those groups of plants, however, his deeply entrenched "New England conscience" and his always kindly temperament perpetually got in the way. He would not turn away from inquiring visitors. No question about anything within or bordering on his fields would be dismissed by him. Consequently, amateurs and professionals of all grades perpetually came to him for help and advice. Time-consuming visitors would allow themselves to occupy his time on rather trifling matters; and too often those who should, through long experience, have learned the location in the library of standard works, would calmly sit while he got the books for them! This unfailing devotion to all who asked his aid was considered by him a real duty. Some others, hearing the voice of an approaching interrupter, would quietly gather up their work and fade from sight. Not so Weatherby. He would not have approved of Thomas Nuttall's trap-door.¹

Nevertheless, in spite of this most conscientious aiding of others, he accomplished large results and his remarkably extended bibliography (which would total many more titles if he had not so often refrained from appending his initials to memoranda and discussions which obviously came from his pen) shows a good share of outstanding technical studies, interspersed with minor notes and wonderfully illuminating reviews. Many scores of letters received from botanists all over the world by Mrs. Weatherby emphasize his remarkable capacity to accomplish large results in scientific writing, while giving liberally of himself

¹ In the fine old house in the former Harvard Botanic Garden where Nuttall had lived Mrs. Asa Gray "had retained Nuttall's trap-door. In the corner of the large living-room and study there hung a stout cord. Whenever Thomas Nuttall heard the garden-gate click or a step on the walk he pulled the rope and the trap-door in the ceiling opened nearly to the floor, with a step-ladder on its upper side. Then Nuttall disappeared and was never at home".—Fernald in Proc. Am. Phil. Soc. lxxxvi. 66 (1942).

to all who needed help. All such letters are in the same affectionate and appreciative vein and they are beautifully exemplified by a brief note to the present writer from one whose too rare visits to the Gray Herbarium have been a joy looked forward to by all the staff, the skillful and remarkably informed historian of southwestern science, Professor Samuel W. Geiser:

I have noticed, with real sorrow, your terminal note in the July RHODORA on the death of Mr. Weatherby. He was to me on numerous occasions most kind, most helpful, most considerate; and both Dr. Shinnars and I shall constantly remember him as one of the ornaments of the Gray Herbarium. Like everyone else who knew him, whether well or less intimately, we shall miss him very much. Do not think me presumptuous if I give my condolences to the Herbarium Staff members whom I am acquainted with.

Another responsibility assumed by him was his liberal aid in the preparation of the Gray Herbarium Card Index. Carried forward primarily by Miss Marjorie W. Stone, the Index constantly brought up technical problems: deciding what category was intended by authors who neglected to clarify such questions; finding the exact date of issue of obviously misdated publications; determining whether authors actually accepted combinations and names which they carelessly published; and many intricate and unforeseen dilemmas requiring technical understanding. So far did Weatherby's careful consideration of such details enter into the Index that many subscribers considered the solutions as indicating that he was the maker of the whole series of cards and that his decisions could not be challenged. His keenness in such matters led to his election to the British Society for the Bibliography of Natural History.

As an adjunct to his studies in Cambridge Weatherby's several visits to the European herbaria were important. On these trips he was regularly accompanied by Mrs. Weatherby. While he made critical examination of types in the groups on which he was working she supplemented his notes by photographs or drawings. Similarly, they made photographs and notes on the types of Stephen Elliott so far as they are preserved at the Charleston Museum.

Quite outside the special work of or associated with the Gray Herbarium his constant activity and resourcefulness were apparent. One of the original members of the Connecticut Botanical

Society and its Vice-President for nearly twenty years, he rarely, if ever, missed one of its annual meetings. His work on the great Catalogue has already been noted. An early member of the American Fern Society, which he joined in 1912, he began publishing in its Journal in 1913 and from then until his death most numbers contained his illuminating articles, technical notes, reviews and editorial items. He was inclined to take no credit for the brief notes and reviews, sometimes signing them, often not; but, even so, his finished style, references to earlier signed reviews or other clues often identify the author, for even in severe criticism of work which was superficial, hasty or ill-advised his whimsical humor would appear. Thus, in his detailed analysis of Dickason's *Phylogenetic Study of the Ferns of Burma* and that author's unsuccessful attempts to account for many lines of descent (or ascent), the reviewer tucked in the footnote: "Taken by and large, the critics of Darwin seem to have worked themselves into the position of maintaining that he was wrong in just about everything except his main conclusion. It might not be amiss to remember, now and then, that one of the salient features of Darwinian theory is its innate reasonableness". Am. Fern Journ. xxxvii. 28 (1947). Continuing the discussion, Weatherby wrote on the next page: "Incidentally, in making up his series, Dickason has accepted 32 out of 33 of Ching's families segregated from Polypodiaceae. But, though he reproaches Ching for inadequate discussion, he can find no better reason for this acceptance than Ching's own—"that it is in harmony with the present tendency". One can say as much for women's hats." Then follows: "After such discussion, one feels a sort of yearning for the simplicity and neatness of soral development in Diels's treatment of the Polypodiaceae." Then, after discussion of theories of soral development and change, he concluded his brilliant and really important discussion: "Any phylogenist will tell you this is too good to be true; and probably he is right; nature is not so simple. But not every day does one find a fairy-tale which fits so nicely with observed facts."

This insistence on recognition of the soundness (until proved unsound) of the work of Diels and other cautious and closely reasoning students of the ferns and the unsoundness of the work of Ching and his followers was again made apparent in a late

review published by Weatherby in the *Fern Journal* (xxxix. 59–61). There discussing the rather hasty and often inaccurate *Phylogeny and Ontogeny of the Pteropsida. I. Schizaeales* by Dr. Clyde F. Reed, Weatherby opened with a footnote: "One might take exception to certain slips in Latin, which, though pardonable in these days of non-classical education, could have been reduced in number by a little more attention to a grammar, a lexicon, and to the good models provided by Prantl." Then, after some analysis of the work he concludes:

Dr. Reed seems to have taken Ching as a model. Like Ching, he fails to give any direct or adequate answer to the query which at once arises: why and how does phylogeny require the erection of genera into families and the more or less jacking up in rank of previously recognized groups? This is an unfortunate lack, for it generates in skeptical minds the suspicion that phylogeny is, in these cases, only camouflage for plain, old-fashioned splitting. Whether or not this suspicion is justifiable, there is no doubt that, in such work as the present, taxonomy (properly, the construction of cross-sections of lines of descent) and phylogeny (properly, the conjectural following back of these lines into the geologic past) tend to become synonymous. In spite of their interlocking nature they are not the same thing. When this is recognized and really interpretative discussion provided, work like Dr. Reed's, which undoubtedly represents a strong present trend in classification, will become more convincing.

Such reviews, like those of Small's *Manual* and others in which conservatism is thrown to the wind, should not remain partly hidden in the specialized journals in which they appeared. Their reading and careful consideration by students in those biological fields where it is the ignorant custom to "knock" taxonomy as "mere collecting of postage stamps" would, if that is possible, bring a ray of illumination to their too often cloistered outlooks.

Returning more directly to the American Fern Society, it should be noted that in 1915 Weatherby joined the board of Editors of the *American Fern Journal*, continuing as an Editor to 1940, and in 1943 and 1944 he was President of the Society. His services to the Society were unlimited and when he resigned in 1940 as an Editor his coworker through many years, Dr. Ralph C. Benedict, closing a highly appreciative account of Weatherby's work for the Society, wrote (*Am. Fern Journ.* xxxi. 3):

New Englanders are notably reticent, not given to volubility in the expression of personal views and philosophy. However, it is possible at times to discover a man's aims and point of view indirectly, by noting how

he appraises others and what he admires in them. Read Mr. Weatherby's tribute to C. H. Bissell, in Volume 15 of the JOURNAL. From that I quote, with a minor modification, a sentence which most appropriately characterizes Charles Alfred Weatherby today: "A man to whom his fellow members turn with entire confidence in any matter which calls for perfect integrity, sound judgement, and constructive ability."

Similarly, the New England Botanical Club owes much to him. A member since 1906, he was Librarian from 1928 and in 1929 he became one of the Associate Editors of RHODORA. With his critical aid essentially all (except those of the late Alexander W. Evans and a few others who wrote unexcelled English) manuscripts and proof-sheets of RHODORA were scrupulously read, up to some papers still unpublished; and many authors accepted without demur the introduction of hyphens or semicolons and corrections of English and Latin, matters in which, without his watchful eye, future numbers of the journal may become delinquent. In 1945 he served as President of the American Society of Plant Taxonomists and from 1943 was an Editor of Brittonia. Much of his time was taken up in the preparation of the unofficial special edition of the International Rules of Botanical Nomenclature (with Camp and Rickett) published in Brittonia in 1947. Much more went into the canvass of American botanists and the preparation (as a member of the Central Committee on Nomenclature of the American Society of Plant Taxonomists) of the Proposed Changes in the International Rules of Botanical Nomenclature, published in Brittonia for June, 1949.

He had taken his turn as a Councillor of the American Academy of Arts and Sciences, as an Editor of the American Journal of Botany, as Chairman of the Committee on Nomenclature of the Botanical Society of America; and doubtless in many other helpful capacities which his modesty prevented his noting in his statements in the usually available sources of such information. The recognition of his keen understanding of problems in nomenclature which most pleased him and which loaded him with a full quota of laborious study, was his appointment at the International Botanical Congress at Amsterdam in 1935 as one of the two¹ American members of the International Committee on Nomenclature of Vascular Plants, an appointment which he, like his coworker, Rehder, took as meaning real study. His last

¹ ALFRED REHDER, the second member, died one month after Weatherby, on July 21, 1949.

hours at the Gray Herbarium were spent on work of this Committee. Only a few days earlier he had been greatly pleased by his appointment as Vice-President of the Section on Nomenclature of the International Botanical Congress to be held in Stockholm in the summer of 1950, and he and Mrs. Weatherby were arranging for their passage to Stockholm. Most unfortunately, the Section on Nomenclature will be without his cautious and wise counsel.

As if all these activities were not enough to satisfy the intellectual appetite of anyone, Weatherby kept up a keen interest in and appreciation of music and art and, for good measure, spent many evenings with his volumes on military history and strategy. Mrs. Weatherby tells of his reading the details of manoeuvres in Europe during the second world-war and suddenly exclaiming: "There, you see, they have done what I said they should do"—this from one of the most peaceful and peaceable men who ever lived.

Those who have best known him have long recognized the rare qualities of Alfred Weatherby: his patience and unselfish devotion to what he conceived as his duty; his loyalty to friends, even though he strongly differed with them; his capacity for close and accurate study under handicaps which would discourage others; his cheerfulness in the face of obstacles and his readiness to set aside his own interests in order to help those who asked his assistance. These are superlative virtues and not often met. It is doubtful if in these days such a botanist and helper of botanists can be found to take his place.

GRAY HERBARIUM.

BIBLIOGRAPHY OF CHARLES ALFRED WEATHERBY

Compiled by M. L. FERNALD AND BERNICE G. SCHUBERT

[Omitting official Notices and unsigned Memoranda; also unsigned Reviews in the *American Fern Journal*, many of them with important criticisms and expressions of personal judgment. Also omitting two studies in literary fields, published in his senior year in college in the *Harvard Monthly*, xxiv. 173–184 and 207–209 (1897) and a third in vol. xxviii. 64–74 (1899).]